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**Routine, creativity and leadership in Schumpeter and
von Mises' analyses of economic change:**

a new look at recent debates on routines *

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ABSTRACT – The purpose of our contribution is to analyse the notion of routine as it is developed in recent economic literature in the light of two past economists, Joseph Schumpeter and Ludwig von Mises. We will focus on one peculiar feature put forward by the two Austrian economists, namely, on the distinction between adaptive / routine-minded behaviour on one side, and active / creative behaviour on the other. According to us, this feature is worth emphasizing since it permits to shed some new light on the long disputed Nelson and Winter's conception of routines. Our conjecture is that if Nelson and Winter had taken up the aforementioned distinction, they would have developed a richer view of economic behaviour and of its interweaving within the firm or the social environment.

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INTRODUCTION

Routines are a crucial research agenda for understanding regularity and change in economic activity. This debate is rooted in two economic traditions: the old institutionalist approach represented by Veblen and Commons insisting on habit, practice, rules and routines (see Lazaric 2000), the Austrian tradition focusing on the emergence of rules governing economic action and on the phenomenon of leadership as a driving force of economic change.

The debate about routines have been recently galvanized and reactivated by the seminal work of Nelson and Winter, building on Simon and Schumpeter's contributions to the analysis of economic rationality and economic change (cf. Nelson and Winter, 1982). Following this perspective, many scholars of Nelson and Winter have defined routines as "an executable *capability* for repeated performance in some *context* that been *learned* by an organization in response to *selective pressures*" (cf. Cohen *et al.* 1996: 683). This definition shows that routines are the result of a learning process and thus, are neither stable nor opposed to innovation or change (see Becker, Lazaric, Nelson and Winter, 2005). As emphasized by Schumpeter (1942) and corroborated by many contemporary case studies, innovation can be routinized to a large extent. Besides, improvisation appears to play an important role in innovation processes and economic activities in general (see Miner, Bassof & Moorman 2001; Baker, Miner & Easley 2001). We should also keep in mind that routines are effortful accomplishments, though they seem to be 'immutable' at first sight (see Pentland and Rueter 1994; Feldman 2000, 2003; Feldman and Pentland 2003). Routines are indeed likely to change because they involve human actors that are bound to amend them (see Feldman 2000, Feldman and Pentland 2003). The nature of this change is linked to the personal visions of members inside organizations and to the instability of underlying

individual and organizational aims behind a process of transformation. Moreover, routines often entail tacit knowledge, which is likely to influence individuals when implementing or replicating routines, and thus constitute an additional source of intrinsic variation (see Becker and Lazaric 2003).

If recent literature insists on the problem of the building of dynamic capabilities behind changes of current routines (see Teece, Pisano and Shuen 1997; Eisenhardt and Martin, 2000; Winter 2002), the question of intentionality and human will underlying this change still remains to be examined. This implies to investigate some neglected dimensions within the evolutionary theory of the firm, such as the role of creativity and leadership, as underlined by the Austrian School of economics a long time ago (see Witt 1998).

This paper provides us an opportunity to revisit von Mises and Schumpeter's conceptions on the notions of routine, creativity and leadership. We think that this investigation is worthwhile since it permits to emphasize the impact of social forces in both the emergence and the evolution of routines and thus, provides food for thought. The crucial problem so far to be solved lies, indeed, in the understanding of how and why routines change (see Lazaric 2000), a question which, according to us, is not just a matter of market pressure.

The paper proceeds as follows. The first section summarizes core notions of Mises' methodology and discusses how, in this framework, the notion of routines can be coped with. The second part deals with Schumpeter's vision of the relation between individual motives, routines and their interaction with social forces. In conclusion, we review the two authors' main insights in the light of contemporary evolutionary theory.

I. MISES: AN ATTEMPT AT CONCILIATION BETWEEN APRIORISM, SUBJECTIVISM AND SOCIAL INTERACTION

Nelson and Winter and their scholars scarcely refer to Mises' analysis as a source of inspiration. However, as rightly pointed out by Witt, Mises put emphasis on subjective knowledge which "is only indirectly and partially accessible to the outside observer" (see Witt 2003, 373). This Misesian insight, referred by Witt as the 'subjectivism problem' is one feature that the evolutionary approach should come to terms with, if the emergence of novelty is to be taken seriously (Ibid). Moreover, Mises insists on the phenomenon of leadership, defined as a form of rationality which differs from routine-minded behaviour, as a major driving force within the market process.

I. 1. The relation between intentionality and economic action

Mises' methodological framework, as developed in 1933 in *Epistemological Problems of Economics*, is anchored in the distinction, inherited from the German logic and philosophy, between two types of cognition: *Begreifen*, i.e., conception vs. *Verstehen*, i.e., understanding. As well known, the participation of his teacher Carl Menger to the 'Methodenstreit' strongly influenced Mises. Mises indeed radically departed from the claimed position of the Historical School at that time according to which, human action, since it can only be approached "from within", i.e., through the "meaning that the actor attaches to his action" cannot be subject to "universally valid principles" (Mises [1933] 2003, 137–38). On the contrary, Mises maintained that there was some room for the development of a science of human action, which he labels 'praxeology' –as opposed to 'history' that cannot aspire to such a method–

and which is grounded on universally valid knowledge. He added that ‘economics’ could be considered as “the best elaborated branch” of praxeology, pointing out that:

[i]n all its branches this science is *a priori*, not empirical. Like logic and mathematics, it is not derived from experience; it is “prior to experience”. It is, as it were, the logic of action and deed. (Mises [1933] 2003, 13; emphasis added)

He held as a proof of his assertion that several great economist, like Hume, John Stuart Mill and Stanley Jevons, were at the same time great logicians (Mises [1933] 2003, 13 n. 3).

Mises’ strong claim in favour of the apriorist approach can be traced back to Aristotelian philosophy; it amounts to consider that any economic or social fact is grasped through reason, i.e., through theoretical logical propositions that are prior to experience. This methodological standpoint implies that these logical propositions cannot be subjected to empirical validation. For Mises, the apriorist approach in praxeology or in economics is a methodological prerequisite if one wants to understand human action. In his book *Human action*, he defines human action as a “*purposeful* behaviour” (Mises [1949] 1996, 14; emphasis added) or a “will put into operation and transformed into an agency” of which “purpose is a person *conscious* adjustment to the state of the universe that determines his life” (Ibid: 12; emphasis added). He adds that human action can only be rational:

Human action is necessarily always rational. The term ‘rational action’ is therefore pleonastic and must be rejected as such. (Mises 1996 [1949], 19)

Having this conception of human action in mind, we now understand why action requires the pre-existence of logical relations that allow individuals to make decisions and help them to take the appropriate deeds¹. These a priori logical relations or principles, i.e, in fact, “the logical structure of human mind” form the “ultimate category of action” (Ibid, 34). Mises refers both to the principle of “causality” and to the principle of “teleology” as necessary tools for bringing about the intended state of the world and for grasping reality (Ibid, 25):

What we know about the fundamental categories of action – action, economizing, preferring, the relationship of means and ends, and everything else that, together with these, constitutes the system of human action – is not derived from experience. (...) As an a priori category the principle of action is on a par with the *principle of causality*. *It is present in all knowledge of any conduct that goes beyond an unconscious reaction.* (...) *The fact that our deeds are intentional makes them actions.* Our thinking about men and their conduct, and our conduct toward men and toward our surroundings in general, presuppose the category of action.” (Mises [1933] 2003, 15; emphasis added)

Such a conception of human action leads Mises to reject psychological approaches –such as behaviourism for instance (Mises [1933] 2003, 138; and Mises [1949] 1996, 12) – which concentrate on the psychological content or on the empirical meaning of human actions and

¹ For P. Kesting, an action can be broken up into three parts : 1. the *intention*, i.e. “the particular state of the word that an actor wants to bring about”; 2. the *deed* or the *action taking*, i.e., “the sequence of the moves of his body an actor takes to bring about the intended state of the world”; 3. *action control*, consisting of two parts (conscious “action planning” and both conscious and subconscious, “action steering”) and defined as “what an actor plans to do and what he, in fact actually does, to bring about the intended state of the world.” (Kesting, 2004: 4–7)

the subject matter of which is the study of “the internal events that result or can result in a definite actions [whereas] the theme of praxeology is action as such” (Ibid).

To summarize, Mises’ apriorism goes in hand with a conception of human action, according to which action is governed by reason and is necessarily intentional, rational and conscious. We shall now investigate how such an approach can be reconciled with the consideration of any concept of routine.

I.2. From intentionality to routines

At first sight, Mises’ methodological perspective cannot accommodate to any concept of routine. In particular, it is not consistent with the many approaches that emphasize the tacitness and automaticity dimensions of routines in order to distinguish them from the pure logic of choice or from problem solving. However, it is possible to account for a conception of routine in Mises if some room is left for deliberate choices (for a discussion of the group of authors –called the ‘imperialists’– who allow for such a possibility, see the paper of Cohen *et al.* 1996).

Another shortcoming of Mises’ methodological approach relies to his radically subjectivist posture. Mises indeed argues that:

(...) nobody is in a position to substitute his own value judgments for those of the acting individual, it is vain to pass judgment on other people’s aims and volitions. (Mises [1949] 1996, 19).

From this standpoint too, Mises' perspective conflicts with many modern approaches of routines, notably those whose arenas of application consist in social institutions, such as firms or organizations, and which consider that routines are primarily "social, [and] not individual, phenomena" (see Becker and Lazaric 2003, 1)².

Nevertheless, if we now concentrate on Mises' analysis of the market process, we find some room to deal with the notion of routine. Mises' endeavour to provide an explanation of market coordination implies to take into account social interaction somehow or other. But his strongly individualist methodological posture prevents him to allow some role for collective behaviour. As he emphasized:

[S]ociety is nothing but the combination of individuals for *cooperative effort*. It exists nowhere else than in the actions of individual men. It is a delusion to search for it outside the actions of individuals. *To speak of a society's autonomous and independent existence, of its life, its soul, and its actions is a metaphor which can easily lead to crass errors.*" (Mises [1949] 1996, 144; emphasis added)

Mises' analysis of social interactions or of 'cooperative effort' is to be found elsewhere than in collective entities, which exist independently from individual actions. His analysis starts from the idea of introspection, which he conceives a cognitive device allowing the constitution of some kind of homogeneity or familiarity in individual agents behaviour:

² Habits are followed by individuals whereas routines are social in the sense that they are followed by individuals and are the by-product of social and cognitive actions. For a similar point, see Hodgson 1997, 2003 and for a discussion on the necessary micro-foundations of routines, see Felin and Foss (2004).

[I]t is beyond doubt that the principle according to which an *Ego* deals with every human being as if the other were a thinking and acting being like himself has evidenced its usefulness both in mundane life and in scientific research. It cannot be denied that it works. (Mises [1949] 1996, 24)

The familiarity, which one can observe in individual behaviour, stems from the fact that individuals do have in common in their mind the same logical structure³. In *The Ultimate Foundations of Economic Science*, Mises writes:

What we know about our own actions and about those of other people is conditioned by our *familiarity with the category of action* that we owe to a process of self-examination and introspection as well as of understanding of other peoples' conduct. To question this insight is no less impossible than to question the fact that we are alive." (Mises [1962] 1978, 72; emphasis added)

This idea of introspection moderates, in a way, Mises' apriorism. More precisely, it allows agents to learn from their own experience and from observation of their fellow men. Although Mises strongly criticizes the use of experimental or inductivist methods in social sciences, he however does not deny the role of 'common experience' and 'practice' as means to acquire knowledge in the everyday life.

To be sure, for Mises, introspection must necessarily be associated with *observation*, *appreciation* and *experience* of 'real' phenomena, which are reflected on the human mind by

³ According to French sociologists, familiarity seems to play an important role in the building up of routines because it enables ease and customary ways of doing things (see Breviglieri 2004; and Thévenot 1994).

means of the logical categories of the human mind. Mises takes the example of the scales of values or wants of agents, which are not given, but “manifest (...) [themselves] only in the *reality of agents*”, i.e., by self-observation of their own acts (Mises [1949] 1996, 95). These features of individual actions are not sufficient for perfect inter-individual coordination. Obviously, the process of interpreting the reality can only be imperfect. On the one hand, the ultimate categories of action cannot convey perfect knowledge because:

[t]he principles of cognition –causality and teleology– are, owing to the limitations of human reason, imperfect and do not convey ultimate knowledge. (Mises [1949] 1996, 25)

Moreover, individual behaviour is not governed by determinist laws and there are as many ways of perceiving and interpreting real observed phenomena as there are individuals. Under these conditions, individuals, though being rational, are likely to make errors in selecting the appropriate means for reaching their ends:

It is a fact that human reason is not infallible and that *man very often errs in selecting and applying means*. An action unsuited to the end sought falls short of expectation. It is contrary to purpose, but it is rational, i.e., the outcome of a reasonable –although faulty– deliberation and an attempt– although an ineffectual attempt –to attain a definite goal. (Mises [1949] 1996, 20; emphasis added)

As we shall now develop, personal experience and individual observation also makes a selection from among agents in the market process. More precisely, Mises insists on the phenomenon of leadership as a mechanism of coordination on markets.

I.3. Routines in the market process

To begin, let us recall how Mises defines the market process. In *Human Action*, Mises conceives the market as a ‘process’ allowing the compatibility of ‘value judgments’ of heterogeneous acting individuals:

The market is a process, actuated by the interplay of the action of the various individuals cooperating under the division of labor. The forces determining the –continually changing– state of the market are the value judgments of these individuals and their actions as directed by these value judgments. (Mises [1949] 1996, 257–58)

Such a conception of market is consistent with Mises’ subjectivist posture. He indeed considers that the market “is not a place, a thing, or a collective entity” (Ibid, 257) and that “the only factors directing the market and the determination of prices are purposive acts of men.” (Ibid, 316)

However, the market mechanisms that result from intentional actions of individual agents are not the sum of their respective contributions. Agents are often not aware of being a part of “the complex of elements determining each momentary state of the market” (Ibid, 315). Mises compares the market process to a “social body”, which makes a selection from among

individuals (Ibid, 315). This selective process is ‘continuous’ since economic activity is continually throwing up new situations that produce changes in the demand and supply of commodities and means of production (Ibid, 313). But this selective process does lead to the establishment of social classes, as it is the case in Schumpeter (see *infra*). It is in fact a strictly individualist selective process, which rewards those who better perceive opportunities of profit and seize them appropriately in view of the situation of consumers’ demand on the market:

The selection of the market does not establish social orders, castes, or classes in the Marxian sense. Nor do the entrepreneurs and promoters form an integrated social class. Each individual is free to become a promoter if he relies upon his own ability to anticipate future market conditions better than his fellow citizens and if his attempts to act at his own peril and on his own responsibility are approved by the consumers. (Mises 1996 [1949], 313)

Nevertheless, although Mises champions radical subjectivist individualism, he does not agree with the contractualist framework of the passage from the Natural state, where the man was isolated, to the Social State, where man enters in connection with other people. For von Mises it is inconceivable to suppose that man can live “in abstracto” (Mises [1949] 1996, 46). Man is always located within a socio-cultural context which influences his subjective choices. Far from being unimportant, this influence can be determining for certain agents, in particular, for leaders (see Arena and Festré 2002). The social-cultural legacy indeed can play a role in the individual agent ability to exploit perceived opportunities on the market. It is interesting,

in this perspective, to refer to Mises' distinction between what he called "the common men" and what he referred as "the promoteur-entrepreneur".

On one hand, common men only adapt to their individuality ideas and beliefs which they inherit from the past and/or from environment. Mises' following description is striking: the common man, according to him,

does not himself create his ideas; *he borrows them from other people.*

His ideology is what his environment enjoins upon him (...) Common man does not speculate about the great problems. With regard to them, he relies upon other people's authority, he behaves as 'every decent fellow must behave', he is like a sheep in the herd." (von Mises [1949] 1996, 46; emphasis added).

On the other hand, Mises introduces the figure of the 'entrepreneur-promoter' defined as a 'pacemaker', "who [is] especially eager to profit from adjusting production to the expected changes in conditions, the one who has more initiative, more venturesomeness, and a quicker eye than the crowd, the pushing and promoting pioneer of economic improvement" (Ibid, 255). The promoter is above all a pioneer; Mises also calls him the "creative genius" (Ibid, 139). His incentive "is not the desire to bring about a result, but the act of producing it" (Ibid, 139). The function that those entrepreneurs exercise corresponds to "a general characteristic of human nature" (Ibid, 269), so that there are promoters in most societies, at different times and in any arena of social activity:

There are in the market pacemakers and others who only imitate the procedures of their more agile fellow citizens. The phenomenon of leadership is no less real on the market than in any other branch of human activities. The driving force of the market, the element tending toward unceasing movement, is provided by the restlessness of the promoter and his eagerness to make profits as large as possible. (von Mises [1949] 1996, 255).

The appreciation ability and the awareness of ‘promoters’ do not however imply that they are mere calculators or that they display a cost-minimizing behaviour, nor that they are routine-minded. On the contrary, von Mises points out that:

[a] prospective entrepreneur does not consult the calculus of probability which is of no avail in the field of *understanding*. He trusts his own ability to understand future market conditions better than his less gifted fellow men. (von Mises [1949] 1996, 299; emphasis added).

This distinction among ‘promoters’ or ‘creators’ and ‘ordinary men’ is important for our comment. First, it is a common feature of the Austrian economic tradition inherited from Menger and Wieser (see Arena and Gloria-Palermo 2001). Second, it permits to explain the diffusion of the initiatives of the ‘promoters-entrepreneurs’ by means of a social process of imitation. In other terms, common men follow ‘habits’ or routines that they may modify only if they are convinced that the promoters will improve their well-being (von Mises [1949] 1996, 47). In this framework, the ‘promoter-entrepreneur’ plays a leading role. His awareness speculative behaviour turned to the discovery of new opportunities is critical (Ibid,

329). Moreover, the figure of the ‘entrepreneur-promoter’ is an analytical device introduced into the analysis in order to deal with dynamics. It is of no use in the fictitious framework of a circular flow economy, i.e., in Mises’ construction of an “evenly rotating economy”, where “there are neither money profits nor money losses” (Ibid. 290) nor innovation or technical progress. But it becomes crucial in the case of an economy “of unevenly and irregularly varying movement” or a “progressing economy”, i.e., “an economy in which the per capita quota of capital invested is increasing” (Ibid, 294). In other words, the distinction between imitative routine-minded vs. venturesome creative behaviour of ‘ordinary men’ and ‘promoters’ respectively, is significant only in a dynamic framework (Arena and Festré 2003)

II. SCHUMPETER: THE RELATIVE DENIAL OF SUBJECTIVISM AND THE DUAL ROLE OF ROUTINES IN SOCIAL ORGANIZATIONS

Nelson and Winter refers explicitly to Schumpeter as one of the two economists who most inspired them, the other one being Herbert Simon (Nelson and Winter 1982, ix). However, as mentioned by Arena and Lazaric, Nelson and Winter’s interpretation of Schumpeter is singularly simplistic if one is to take Schumpeter’s contribution to economic analysis seriously (Arena and Lazaric 2003, 377). In particular, Nelson and Winter emphasize four key features of Schumpeter’s contribution: his adequate formulation of the problem of economic change (Nelson and Winter 1982, ix) ; his “broad” treatment of innovation as the major factor of change (Ibid, 277); his “credentials as a theorist of bounded rationality” (Ibid,39) ; his “hypothesis”, known as the ‘Schumpeterian hypothesis’, developed in *Capitalism, Socialism*

and Democracy, and according to which “a market structure involving large firms with a considerable degree of market power is the price that society must pay for rapid technological advance” (Ibid, 278). More generally, Nelson and Winter hold an interpretation of Schumpeter, in which the institutional background is confined to its technological and organizational dimensions and does not play a leading role in the process of economic change. In particular, they underestimate the fact that for Schumpeter, economic change cannot be conceived without complementary institutional change defined in a broad sense, namely, involving changes in social norms and values as well as individual economic rationality. Moreover, they do not rightly consider that his methodological approach was a combination of economic theory, economic sociology and history (Arena and Dangel 2002, 8–11). This last feature of Schumpeter’s analysis is important for our purpose since, as we shall try to show, Schumpeter’s treatment of individual motives and routines and their relation to economic change provides a good example of his eclectic methodological approach.

II.1. The origin of individual motives

In Schumpeter, human motives are never strictly individual. Rather, they are always embedded in a social and historical context under which they have emerged. This peculiar point is characteristic of Schumpeter eclectic methodological approach. As Donzelli (1983, 639) reminds us, as early as in 1908 in his *Habilitations-Schrift* entitled *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie*, Schumpeter devoted an entire chapter to a detailed discussion on methodological individualism vs. methodological holism, aiming not at establishing the superiority of either approach, but rather, at specifying their respective arenas of application⁴. In his 1927 essay on *Social Classes*, Schumpeter attempts to evaluate the

⁴ See R. Arena and A. Festré (2002), p. 650.

impact of social classes on individual motives and behaviours. Referring to the Marxian analysis of investment, he argues that:

(...) the captured surplus value *does not invest itself* but must *be invested*. This means on the one hand that it must not be consumed by the capitalist, and on the other hand that the important point is *how* it is invested. Both factors lead away from the idea of objective automatism to the field of behavior and motive – in other words, from the *social* ‘force’ to the *individual* – physical or family; from the *objective* to the *subjective*. (...) the crucial factor is that the social logic or objective situation does not unequivocally determine *how much* profit shall be invested, and *how* it shall be invested, *unless individual disposition is taken into account*. (Schumpeter [1927] 1951, 155; emphasis in the original)

Contrary to Mises, Schumpeter thinks that social forces do have some autonomy vis-à-vis individual motives. According to him, the concept of social classes is a real and concrete fact: “every social class is a special social organism, living, acting, and suffering as such and in need of being understood as such” (Schumpeter [1927] 1951, 137).

Moreover, he considers that “class membership of an individual is a primary fact, originally quite independent of his will” (Schumpeter [1927] 1951, 143). Schumpeter indeed argues that:

The individual belongs to a given class neither by choice, nor by any other action, nor by innate qualities –in sum, his class membership is

not individual at all. It stems from his membership in a given clan or lineage. The family, not the physical person, is the true unit of class and class theory. (Schumpeter [1927] 1951, 148)

Finally, he insists on the necessity for the social scientist to be aware of the inertia and path dependency of social structures:

(...) every social situation is the heritage of preceding situations and takes over from them not only their cultures, their dispositions, and their 'spirit', but also elements of their social structure and concentration of power. (Schumpeter [1919] 1951, 144)

Now, for Schumpeter, social classes are defined neither according to their nature nor according to their composition or to their cohesion (Schumpeter [1927] 1951, 139), but according to their function within society. Therefore, the phenomenon of emergence of social classes or of the predominance of some social classes over others, which is Schumpeter's main focus, depends "on the one hand, on the significance that [society] attaches to [the function it performs] and, on the other hand, on the degree to which the class successfully performs the function." (Schumpeter [1927] 1951, 179–80). But the success of a social class to perform its function relies, in the last resort, on individual aptitudes, so that individual motives play a crucial role in social dynamics: "the ultimate foundation on which the class phenomenon rests consists of differences in aptitude" (Schumpeter [1927] 1951, 210). Thus, it seems that individual motives play the leading role in comparison to social stratification in the determination of social dynamics. Schumpeter indeed struggles away at defining the aptitude not as an absolute individual quality but rather as an attribute designed for a specific

function. He argues that the inequality of aptitude which accounts for the unequal distribution of power within a given society must not be understood as “differences in an absolute sense”, but as “differences in aptitude with respect to those functions which the environment makes ‘socially necessary’ – in our sense – at any given time; and with respect to leadership, along lines that are keeping with those functions.” (Schumpeter [1927] 1951, 210–11).

This idea of a social division echoes the distinction made by Mises between promoters and ordinary men. Moreover, as in Mises, it corresponds to a distinction between two types of behaviours or rationality: creative and innovative rationality on one hand, and routine-minded and imitative rationality. But, as we shall show, the concept of routines is not solely related to a type of individual behaviour. It also consists of inherited social practices among social groups that are more or less appropriate to the social function that is emerging inside the society. Moreover, routines are seen as a prerequisite for change, defined in a broad sense, i.e., involving technical, organizational and social change. From this perspective, the notion of routine goes far beyond the mere static opposition between innovation and routines, that is often associated with it in the literature.

II.2. From individual motives to routines

Contrary to Mises, Schumpeter explicitly refers to the notion of routines. First, unlike Mises, he acknowledges that some practices or habits, but also individual aptitudes may have some unconscious determinants that are inherited from the past. This is the case, for instance, of established behaviours or value within a social group such as the “capacity for intellectual analysis” or “will power” (Schumpeter [1927] 1951, 214). In his Essay entitled *The Sociology of Imperialisms*, he refers to the “instinctive urge to domination” (Schumpeter 1919 [1951], 15) or to “activity urges springing from capacities and inclinations that had once been crucial to survival, though they had now outlived their usefulness” (Ibid, 44). These ‘urges’ (or this

Trieb; Ibid, 83) are defined by Schumpeter as human inclinations that have more to do with ‘instinct’ than with reason (Ibid, 83–84).

But unconscious or instinctive capacities may also explain how routines change. For Schumpeter, the unconscious urges also involve creativity and entail permanent changes as well as self-reinforcing mechanisms in the sphere in which they appear. Referring to “warrior nations” (Schumpeter [1919] 1951, 49), Schumpeter argues that:

The explanation lies, instead, in the vital needs of situations that molded peoples and classes into warriors –if they wanted to avoid extinction– and in the fact that psychological dispositions and social structures acquired in the past in such situations, once firmly established, tend to maintain themselves and to continue in effect long after they have lost their meaning and their life-preserving function.”
(Schumpeter [1919] 1951, 83–84)

Schumpeter adds that history shows why and how these civilizations hold in time. They indeed implied the crystallisation of all “popular forces” that characterize this people, included “those in the ideological sphere” in order to constitute “a war machine that, once in motion, continues so long as there is steam behind it and it does not run up against a stone wall.” (Schumpeter [1919] 1951, 49). But what explains the longevity of such civilisations is more the phenomenon of leadership than passive adaptation. In a footnote, Schumpeter writes:

This is no mere analogy of the kind rightly held in contempt. We are dealing with the facts that every purposive organization by its mere

existence adapts its members to its purpose (Schumpeter [1919] 1951, 49 n. 1)

More traditionally, one associates the notion of routine in Schumpeter's work with his vision of statics and in contrast to innovation or creation, which is related to his vision of dynamics. In his *Theory of Economic Development*, Schumpeter indeed tries to argue that routines may explain the existence of an empirical tendency to equilibrium:

The individual household or firms acts, then, according to empirically given data and in an equally empirically determined manner (...). Everyone will cling as tightly as possible to habitual economic methods and only submit to the pressure of circumstances as it becomes necessary. Thus the economic system will not change capriciously on its own initiative but will be at all times connected with the preceding state of affairs. (Schumpeter 1934, 8–9).

The solution to the existence of a tendency towards equilibrium is therefore to be found in the nature of economic behaviour:

All knowledge and habit once acquired become as firmly rooted in ourselves as a railway embankment in the earth. It does not require to be continually reserved and consciously reproduced, but sinks into the strata of *subconsciousness*. It is normally transmitted almost without friction by inheritance, teaching, upbringing, pressure of the environment. Everything we think, feel or do often enough becomes

automatic and our conscious life is unburdened of it. (Schumpeter 1934, 84; emphasis added)

In *Business Cycles*, the tendency towards equilibrium is ensured, according to Schumpeter, by “the rules by which the business-men form their judgement about existing business situations” (Schumpeter 1939, 6). It corresponds to what Schumpeter calls the “general business situation” and to the “ordinary routine” this situation implies (Ibid, 3; and e.g. 40). In Schumpeter’s view, the routine-minded rationality is the rationality of followers who prefer to minimize their efforts to attain their ends.

To summarize, we have shown that, in Schumpeter, routines are associated with unconsciousness but also constitute a general characteristics of human behaviour, the latter being conceived as embedded in a social or institutional environment . As Schumpeter writes:

All people get to know, and are able to do, their daily tasks in the customary way and ordinarily perform them by themselves: the ‘director’ has his routine as they have theirs; and his directive function serves merely to correct individual aberrations. (Schumpeter [1912] 1934, 84)

Now, we shall analyse how Schumpeter copes with the concept of routines when he deals with dynamics.

II.3. From individual routines to economic dynamics

As we have already emphasized, Schumpeter developed an analysis of economic dynamics that cannot be conceived without institutional evolution involving change in social norms and values as well as individual economic rationality.

A good example of Schumpeter's methodological perspective is provided by his analysis of innovation, as developed in his *Theory of Economic Development* as well as in *Business Cycles*. In Schumpeter's pure model, i.e. in his first approximation of business cycles, innovation comes to bear on a system in full-employment general equilibrium with zero profits, a zero rate of interest, where total receipts equal total costs which, in turn, equal total wages plus firm rents, and where, consequently there is no incentive for change. Innovation is the work of a new firm creating new production facilities. This new firm is led by a new economic agent called 'entrepreneur' to be distinguished from the 'mere manager' prevailing in the 'circular flow' whose activities are the product of 'routinized' behaviour. From this perspective, innovation is not to be seen as a mere deviation from routine behavior inside a firm: it also implies the introduction of what Schumpeter called "New Men":

The main reason for introducing this assumption [the assumption of the relation between 'innovations' and 'New Men'] into a purely economic argument not primarily concerned with the structure of society is that it provides the rationale for the preceding assumption.
(Schumpeter 1939, 96)

Innovations do not indeed result from exogenous shocks or endogenous mechanisms of technology creation generated by firm managers or owners. Rather, they are introduced by 'entrepreneurs'. In other words, they presuppose the emergence of leaders whose function is

to promote the transition from the circular flow to economic development. Therefore, innovations and economic development appear to be the natural consequences of the particular new form of leadership that prevails in a market economy. As we have also suggested, the *Trieb* or ‘urge’ provides part of the social explanation of leaders’ motives. Now, if we consider the social and historical context of the market economy, entrepreneurs appear to be the social leaders in this type of economy. This represents ‘a fundamental truth of the sociology of industrial society’ (Schumpeter 1939, 6) insofar as entrepreneurs create the ‘institutional patterns’ of economic development. The excess energy that characterised the leaders of ancient societies based on aristocratic hierarchies and military objectives now turns into what Schumpeter calls ‘energetic’—as opposed to ‘hedonistic’—rationality or egoism (see Arena 1992, 132–135). In modern societies,

[t]here is much less excess energy to be vented in war and conquest than in any precapitalist society. What excess energy there is flows largely into industry itself, accounts for its shining figures – the type of the captain of industry – (...). In a purely capitalist world, what was once energy for war becomes simply energy for labor of every kind.”
(Schumpeter [1919] 1951, 90)

However, innovations do not last forever. Gradually, they are diffused throughout the economic system and transformed into routines or ‘habitual economic methods’ (Schumpeter 1934, 8). As they come to prevail, these individual routines and the resulting network of social rules or norms eventually produce the ‘institutional patterns’ that pervade the markets and influence the internal organisation of the firm.

Swarm-like imitation by followers provides a good example of these gradual transformations (Schumpeter [1912] 1934, 231). Following Wieser, Schumpeter regards

followers as playing a more passive role in that they are the mere recipients of leaders' decisions. They can reinforce these decisions and contribute to their social generalisation through the adoption of imitative behaviour or the manifestation of trust. But they can also resist them, slowing down the process of diffusion or sometimes even preventing the mechanisms of social diffusion from working.

Swarm-like imitation explains why innovation implies some routinization as time goes on and, hence, why routines plays a dual role in Schumpeter's analysis. On one hand, routines are linked to inertia and to stability. On the other hand, they result from creativity and institutional change. We have also emphasized that the unconsciousness dimension of individual behaviour may not only explain the emergence of routines but may also play a central role in institutional change if one refers, for instance, to the 'urge to domination'. The process of diffusion of innovation itself can be submitted to resistance on behalf of the 'followers' or 'imitators'. In this perspective, the diffusion of innovation through society can be analysed as a process of routinization of previous innovations and leadership. This conception is in accordance with Schumpeter's explanation of the rise of large firms in *Capitalism, Socialism and Democracy*. According to him, "Trustified Capitalism" is characterized by a tendency for the entrepreneurial function and its associated characteristics of creativity and leadership to disappear, and thus to be reduced to mere routines:

This social function is already losing importance and is bound to lose it at an accelerating rate in the future even if the economic process itself of which entrepreneurship was the prime mover went on unabated. For (...) it is much easier now than it has been in the past to

do things that lie outside familiar routine – innovation itself being reduced to routine. (Schumpeter 1950, 132)

Such a conception of change, which involves not only economic change (technological as well as organizational change) but also institutional change, i.e., a co-evolution of social functions together with individual aptitudes and behaviours, implies a much richer notion of routine than the usual interpretation of Schumpeter to be found in the secondary literature. This permits to estimate the dynamic dimension of routines in Schumpeter as well as their embeddedness in the social sphere.

To sum up, the emergence of innovation presupposes the existence of leaders that also follow –more or less consciously–some behavioural routines even if they introduce some novelty into the system. Innovation also requires a stable or ‘routinized’ prevailing environment. Now, the process of diffusion of innovation involves the rationalization of change, i.e. the adherence of the society to the novelty. In other terms, this process leads to the gradual fading of the characteristic of novelty and hence, to the routinization of the function of entrepreneurship and leadership.

II.4. Schumpeterian insights revisited: Nelson and Winter seminal work on routines and its limits

Nelson and Winter seminal work is an attempt to entangle two dynamics: the Simonian insights with the Schumpeterian vision. From Simon they borrow the program concept which is a pragmatic vision for solving problem for any decision maker. Simon considers that

decision makers break down problems into sub-problems. He or she follows a rule in order to narrow the scope of the problem. The ‘bounded rationality’ compels him or her to focus his or her attention on a sub-problem but not on its integrity. Nelson and Winter borrow from Simon, Cyert and March in order to define a world where rationality is bounded and where decision makers solve problems by means of routines, which constitute an easy way to focus attention on some part of the problem and permit to save attention and energy.

However the notion of routine coming from Simon and behavioural insights has been considerably enriched by the cognitive dimension. For Nelson and Winter, routines are not always explicit and based on tacit knowledge but, on the contrary, on knowledge which may be difficult to articulate and to codify. This tacit dimension allows Nelson and Winter to anchor the routine concept in the Polanyian tradition which emphasizes the importance of personal judgment and personal knowledge in any conduct of action or any decision. This kind of ‘subjectivism’ present in Polanyi (see Polanyi 1962) is not that much explored by Nelson and Winter who are more inspired by the concept of tacit knowledge than by the complex notion of personal knowledge.

However, routines are both organizational memory, i.e., knowledge which is dormant and not activated and knowledge which is activated daily in productive activity. Routines are consequently defined by their organizational dimension and as a form of repository of organizational capabilities as they store the knowledge of the firm and its future potentiality (see Nelson and Winter 1982). Routines indeed can be observed and described in different ways. There are concrete modalities which can be ‘recurrent action patterns’ and there is also a more general level for expressing those patterns which form the “abstract activity pattern”

(see Lazaric 2000). In other words, routines have both a representation and an expression aspect.

The Schumpeterian dimension is also mobilized by Nelson and Winter as a way for integrating novelty and for increasing performance inside the system. This Schumpeterian heritage is still predominant even in recent work. As Nelson and Sempat argue:

Breaking from prevailing routines is exactly what innovation is about
(..) This so long as old routines continue to be used, there is only limited room for increasing worker productivity by increasing inputs per worker. Significant productivity increase requires the introduction of new routines, which in general will involve new recipes or physical technologies if they are employed productively. (Nelson and Sempat 2001, 48).

Pavitt also focuses on this point by emphasizing the dangers of creative destruction while supporting the importance of innovating routines:

It emerges from our analysis that some of the tasks of innovating routines are long established and continue to be important: for example co-ordination and integration of internal knowledge sources and functions; technology-based product diversification; coping imperfectly with uncertainty; learning by analysing and by doing. Other tasks are growing in importance as a consequence of specialization in knowledge sources; anticipating the dangers of

creative destruction in corporate organizational rather the technological practices. (Pavitt 2002, 129)

One of the major problems with recent work on routines is not related to their cognitive dimension, which has been largely debated (for a survey, see Becker 2004), but rather to the underestimate of the political forces behind them.

As Coriat and Dosi (1997), Cohendet and Llerena (2003) and Lazaric and Denis (2001) have emphasized, political forces, i.e., the trigger or triggers of such change, are not always debated. Leadership appears to be crucial for explaining such a dynamic. As emphasized by Witt, leadership remains crucial in order to create the cognitive vision of the firm and for sharing it with employees (see Witt 1999, 104), since hierarchy and ownership have their own limits for diffusing routines (see Knott 2001, Lazaric and Raybaut 2005). This requires not only a political leadership for imposing this vision but a cognitive leadership able to create some shared vision and to enlarge it. Consequently leadership cannot only be based on authority but must also rely on legitimacy, a notion which is distinct from authority because it has its roots on a state of confidence (see Adler and Boris 2001; for a discussion on authority see Foss 2003). This means that the notion of routine coming from the Nelson and Winter tradition could be enriched by some Schumpeterian insights for explaining rupture and creative destruction at a macro level. At a micro level, a theory of leadership and change of routines need to be debated in order to understand conditions of change, diffusion of beliefs or formation of corporate culture. Legitimacy is an important notion because, as Leibenstein reminds us, an employer cannot monitor the ways of doing things of all employees. His rationality and, consequently his supervision, are limited. This explains the importance of trust but also the room for legitimacy (see Leibenstein 1987, Lazaric and Raybaut 2005).

CONCLUSION

In this paper, we have emphasized the role of leadership in both Mises and Schumpeter's analyses. This feature is typical of the Austrian tradition inherited from Menger and Wieser. However, leadership has not the same meaning in Schumpeter and in Mises. For Mises, it is strongly associated with the *entrepreneurial function*, which constitutes a general characteristic of human behaviour in a context of uncertainty. Moreover, it derives from Mises' subjectivist approach which denies any influence of social forces and focuses on *deliberate action*. By contrast, in Schumpeter, the phenomenon of leadership is linked to *subconsciousness*, i.e., to the function agents exercise within a social context, in which individual psyche has more to do with instinct or reflex than to deliberate reasoning. From this standpoint, *routines* constitute the general feature of human behaviour in Schumpeter. These divergences provide good examples of the diversity of the Austrian School but also reveal the difficulty and the importance of the problems under consideration.

Now, if we concentrate on the notion of routines as it is developed in more recent literature, the question arises as to what could be gained from the revisiting of Mises and Schumpeter.

Schumpeter's conception of routines as a general characteristic of behaviour pervading not

only markets but any social institution, paved the way for an organizational view or routines, which is predominant in Nelson and Winter. But Schumpeter also emphasized that individual routines interact with the social environment, so that routines are bound to change in order to fit with the social function individual agents must perform. In this perspective, routines are not directly opposed to innovation but involve some individual creativity, i.e. some aptitudes or dispositions, to the extent that they evolve together with social norms, values...In this sense, even innovations become gradually routinized. Such a vision echoes some contemporary debates about dynamic capabilities and may provide new insights into “how an economy works and why the pace and direction of its evolution varies so greatly in history and place” (Witt 2003: 382).

As we have stressed, Mises’ contribution shows a dimension which is neglected in the modern Schumpeterian tradition of economic change which Witt refers as the “subjectivism problem”. In particular, he emphasizes the role of introspection and of the “familiarity with the category of action” that echoes some modern contributions on cognition (see Egidi and Bonini, 1997 and 1999; Garapin and Hollard, 1999). Mises’ solution to subjectivism is however self-defeating owing to his apriorist methodological perspective.

To conclude, the modern Schumpeterian literature could gain cross insights of Schumpeter and Mises: from Schumpeter’s insight into the relation between individual motives, routines and social forces on one hand and from Mises’ insight into the subjectivism problem and its associated cognitive aspects in connection with the emergence and the diffusion of novelty, on the other hand.

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